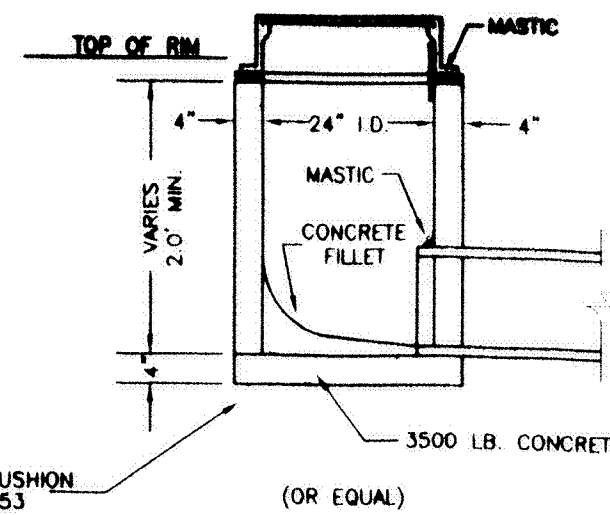
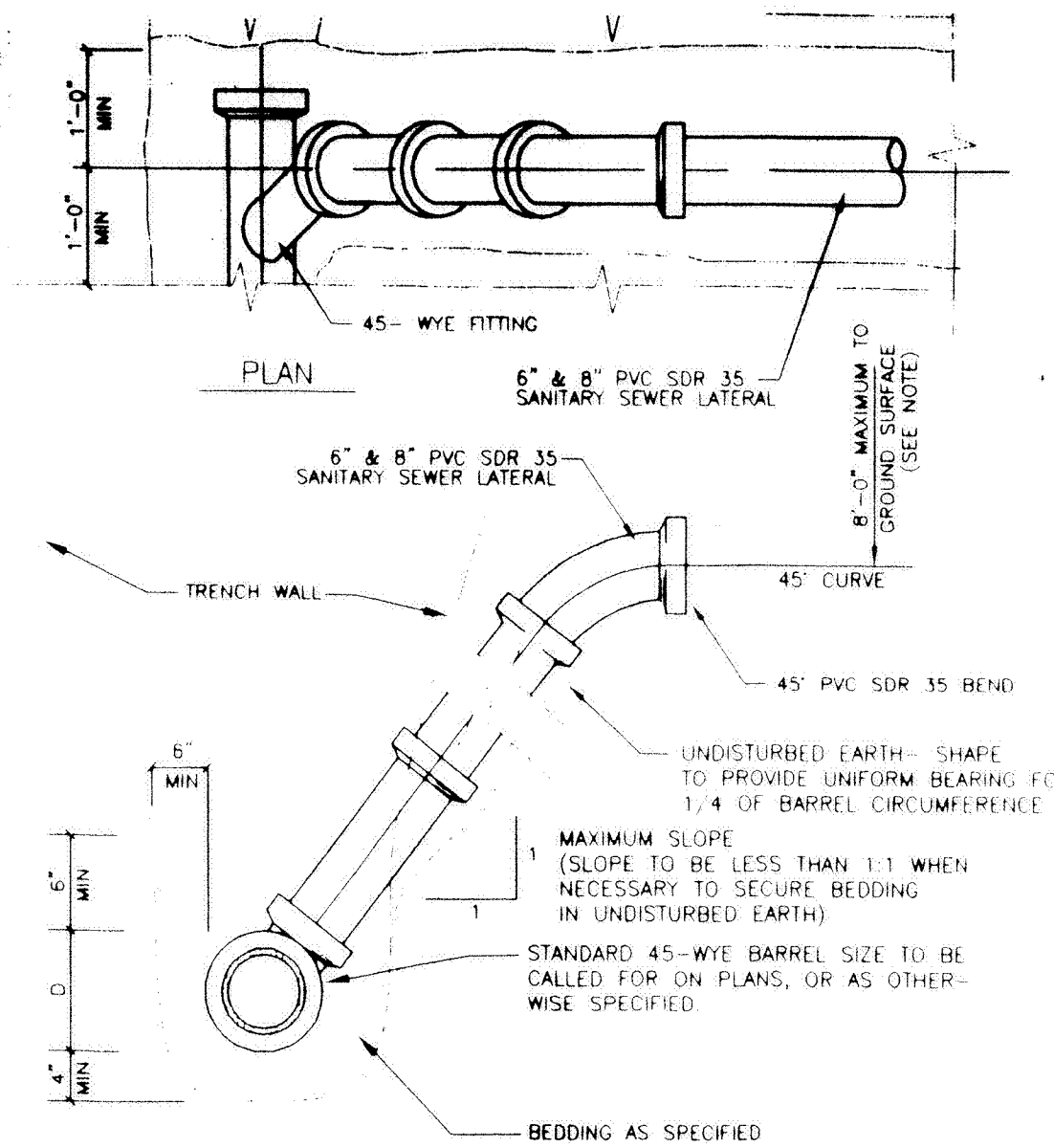


CATCH BASIN

NOTE:
THE CONTRACT UNIT PRICE FOR INLETS AND CATCH BASINS
SHALL INCLUDE THE FRAME AND GRATE SPECIFIED.



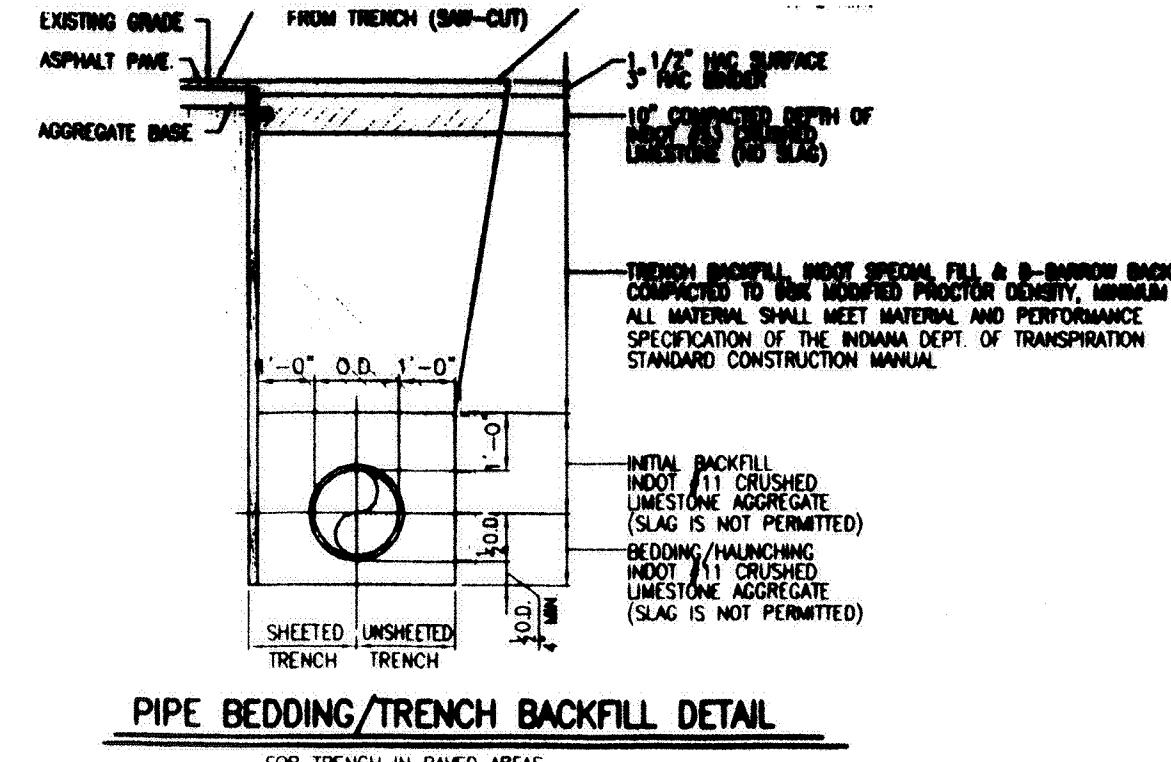
INLET



- NOTES:
1. RISERS TO BE CONSTRUCTED IN LIEU OF WYES WHERE SEWER DEPTH EXCEEDS 10'-0\"/>
 - 2. ALL SANITARY SEWER SERVICE LATERALS SHALL BE PLUGGED WITH A WATERTIGHT CAP & SHALL BE LOCATED WITH 4\"/>

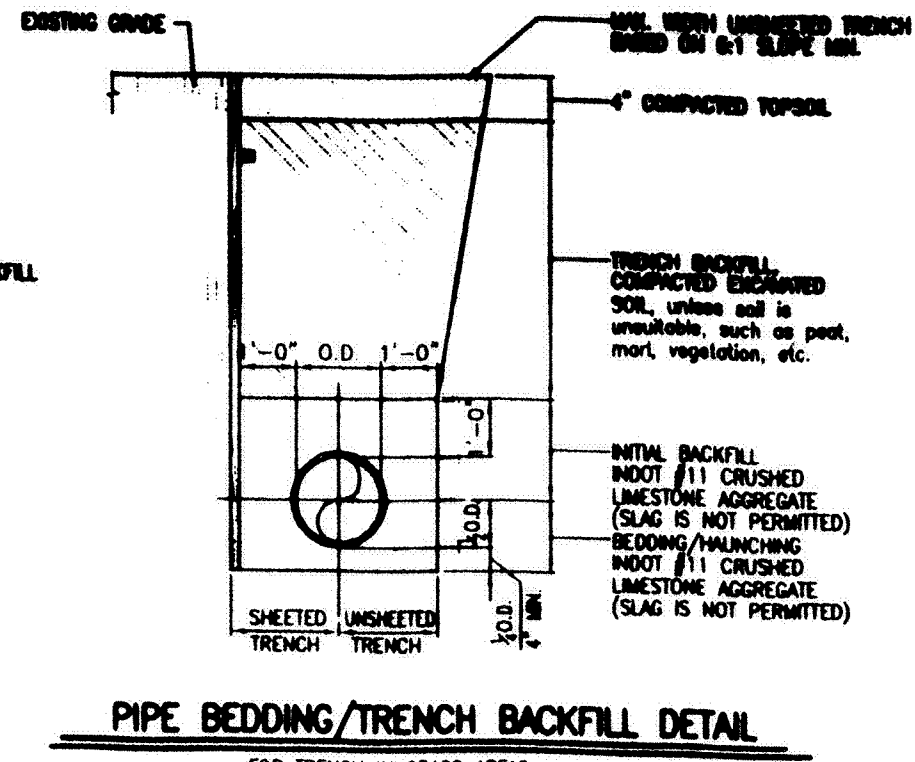
SANITARY SEWER SERVICE DETAIL

SEE PLANS FOR SERVICE SIZE



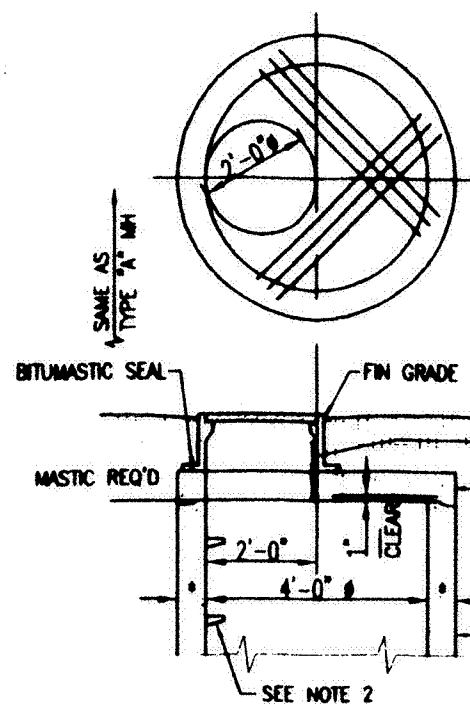
PIPE BEDDING/TRENCH BACKFILL DETAIL

FOR TRENCH IN PAVED AREAS



PIPE BEDDING/TRENCH BACKFILL DETAIL

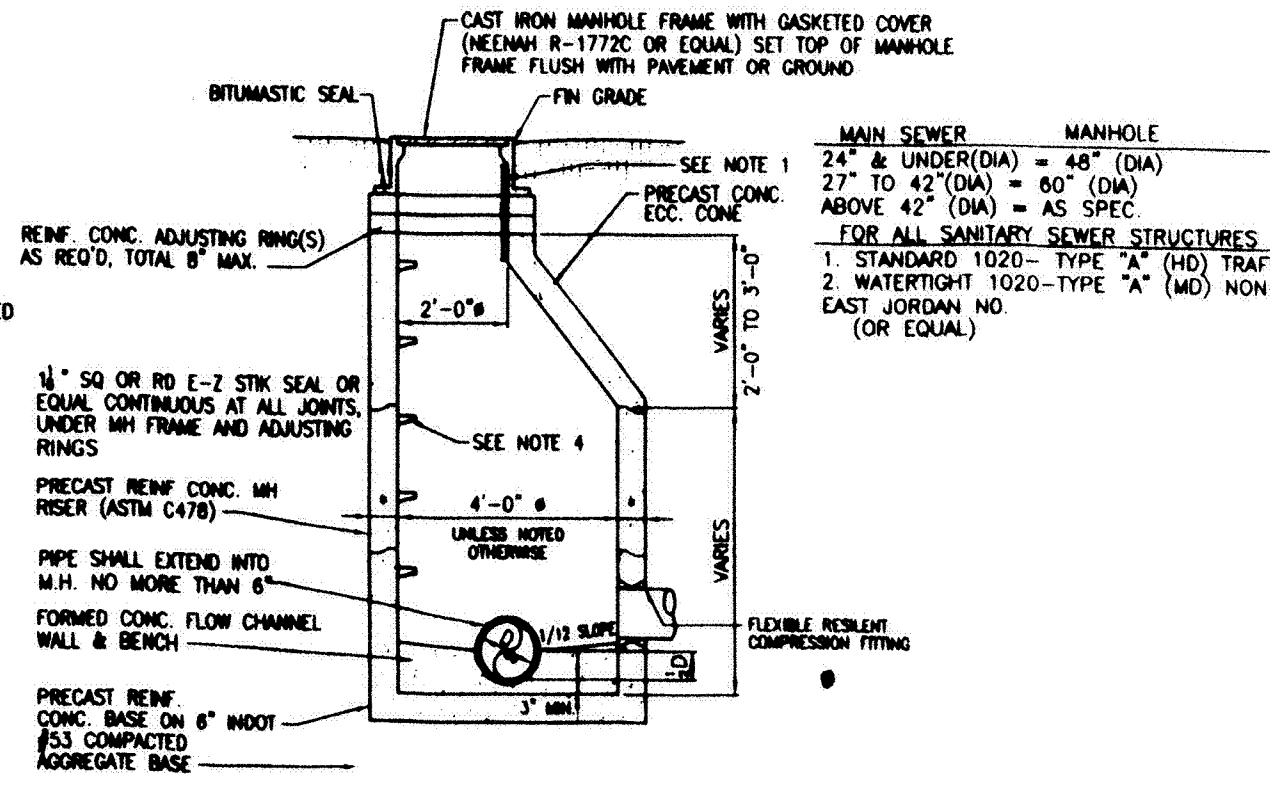
FOR TRENCH IN GRASS AREAS



MH I.D.	WALL THICKNESS
48"	5"
60"	6"
72"	7"

TYPE "C" (FLAT TOP) MANHOLE
USED WHERE RESTRICTED HEAD ROOM
WILL NOT ALLOW FOR TAPERED WALLS

- NOTE:
1. EXTERNAL MH FRAME-CHIMNEY SEAL AS MANUFACTURED BY CRETEX SPECIALTY PRODUCTS OR EQUAL REQ'D FOR ALL MANHOLES.
 2. COPOLYMER/STEEL MH STEPS AS MANUFACTURED BY M.A. INDUSTRIES, INC., OR EQUAL, AT 16" O.C. (MAX)

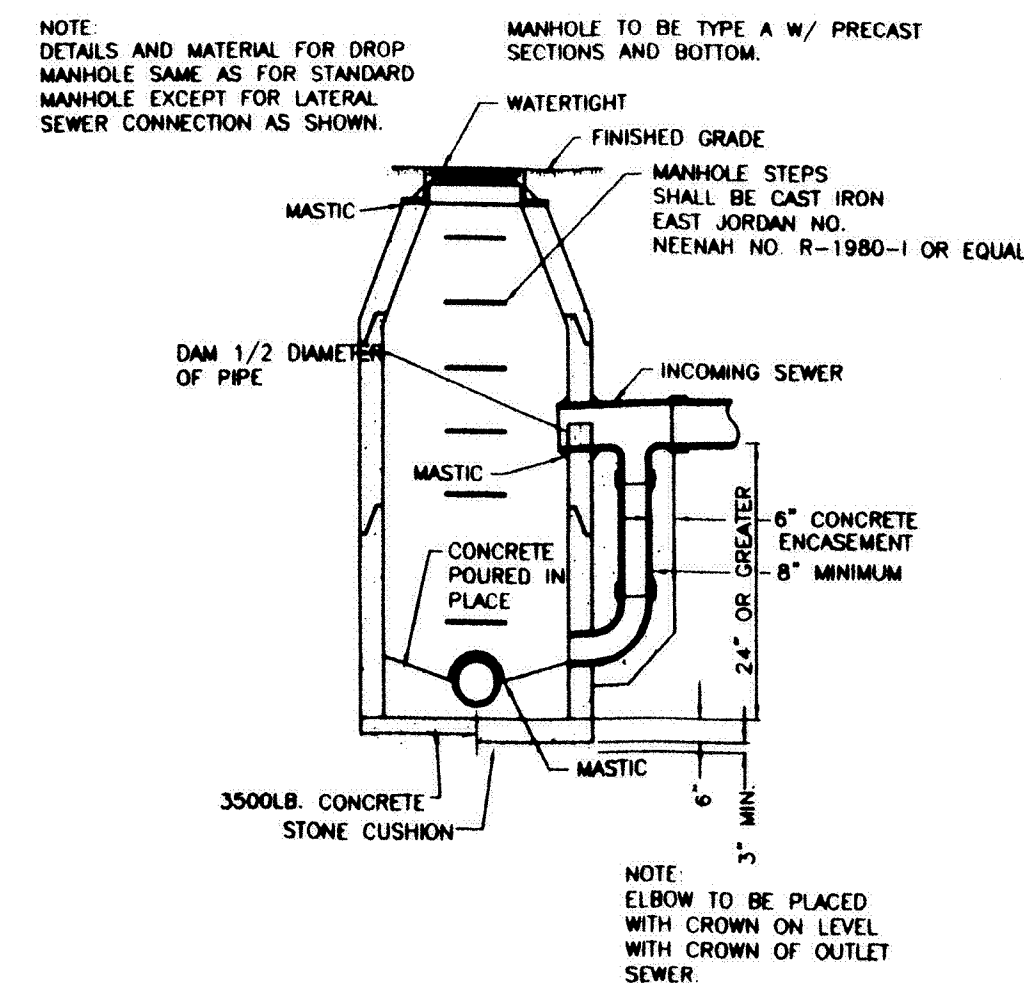


MH I.D.	WALL THICKNESS
48"	5"
60"	6"
72"	7"

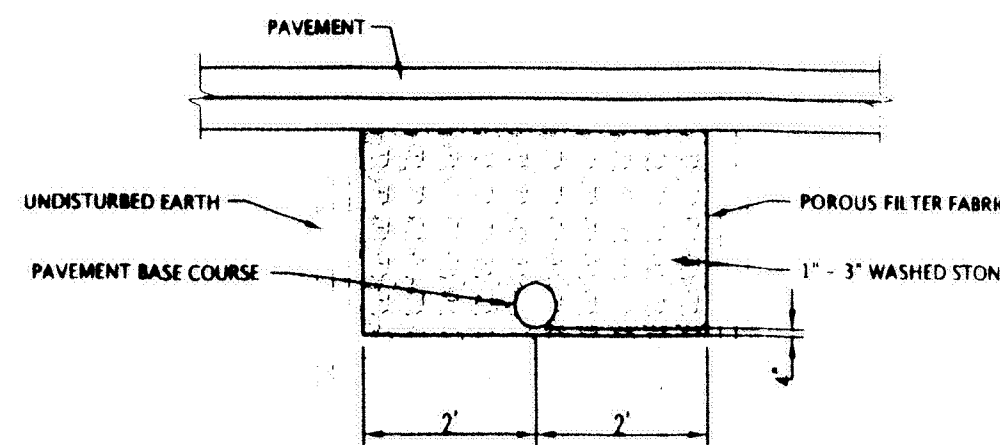
TYPE "A" MANHOLE

- NOTE:
5. EXTERNAL MH FRAME-CHIMNEY SEAL AS MANUFACTURED BY CRETEX SPECIALTY PRODUCTS OR EQUAL REQ'D FOR ALL MANHOLES.
 6. WHERE DEPTH FROM TOP OF CASTING TO INVERT IS LESS THAN 5'-0\"/>
 - 7. WATERTIGHT SEAL IS REQ'D BETWEEN PRECAST RISER AND SEWER PIPE
 - 8. COPOLYMER/STEEL MH STEPS AS MANUFACTURED BY M.A. INDUSTRIES, INC., OR EQUAL, AT 16" O.C. (MAX)

** FOR PIPE SIZE RANGING FROM 8" TO 30" IN DIAMETER



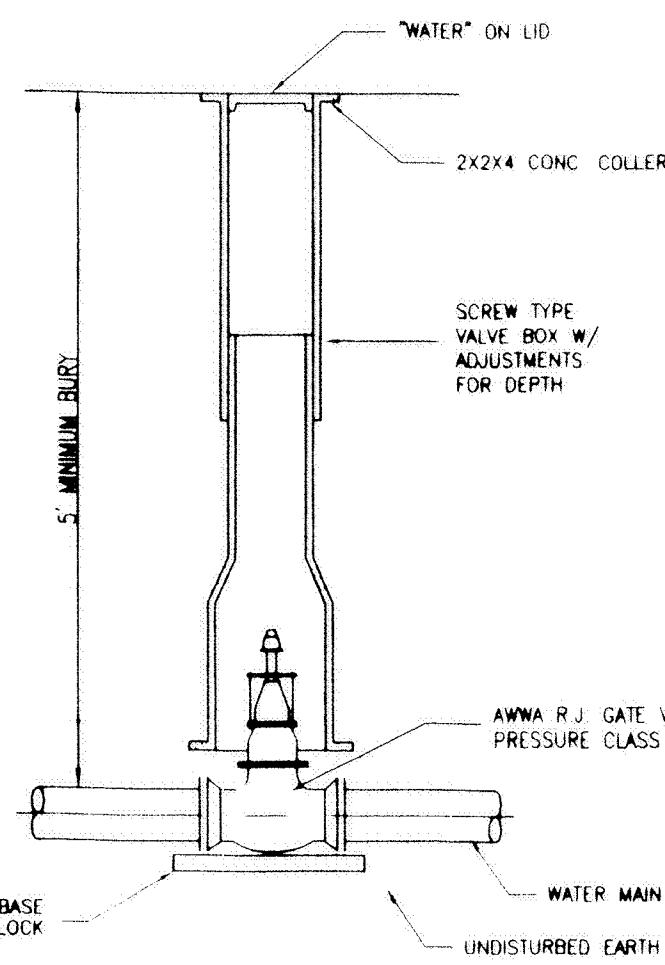
DROP MANHOLE



- NOTES:
1. UNDERDRAIN TO BE INSTALLED AT 1.00% SLOPE TO STORM STRUCTURE.
 2. UNDERDRAIN TO EXTEND 10 L.F. UNDER THE CURB AND CUTTER FROM STORM STRUCTURES AT PAVEMENT LOW POINTS

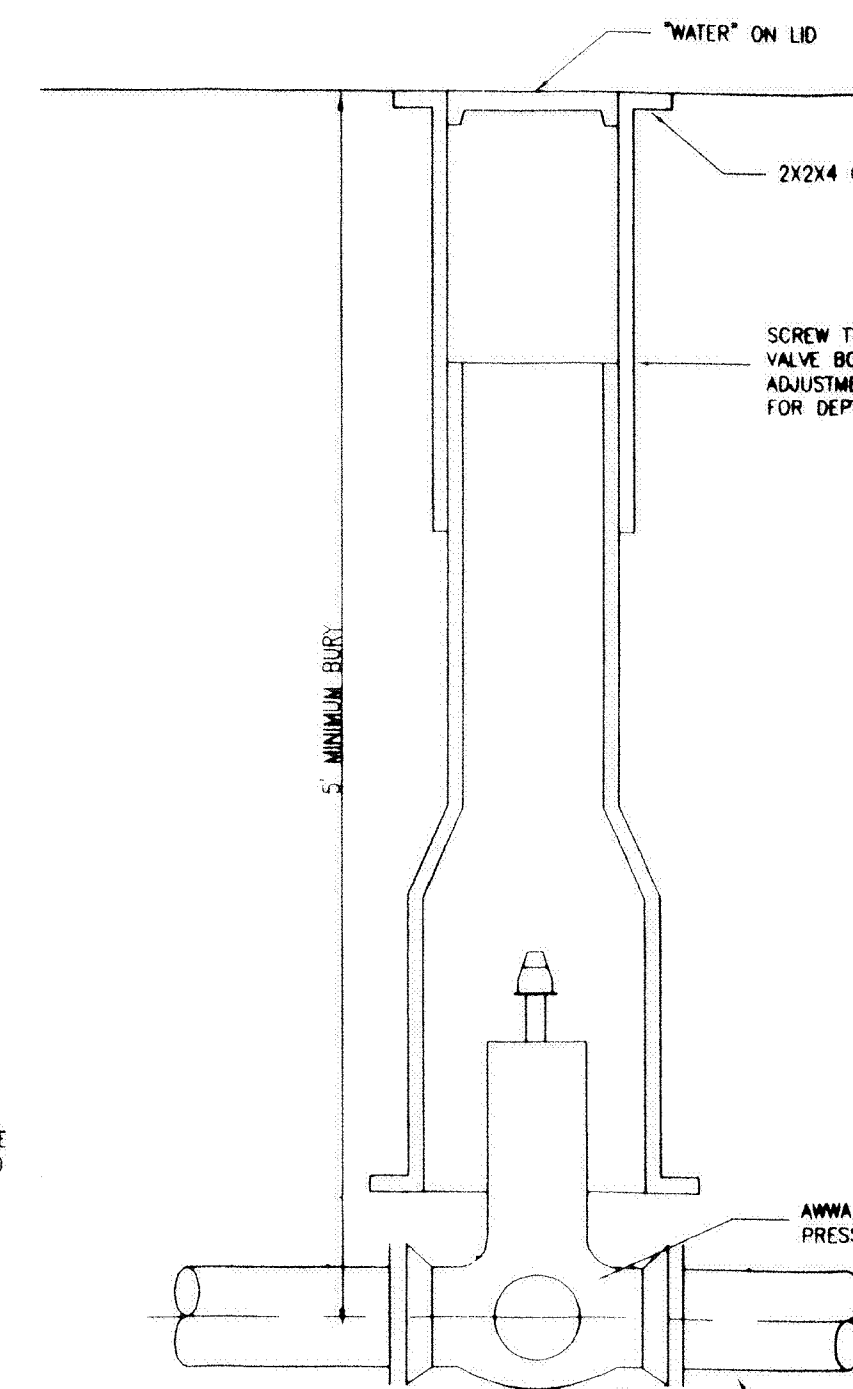
UNDERDRAIN WITHIN PAVED AREAS

NTS



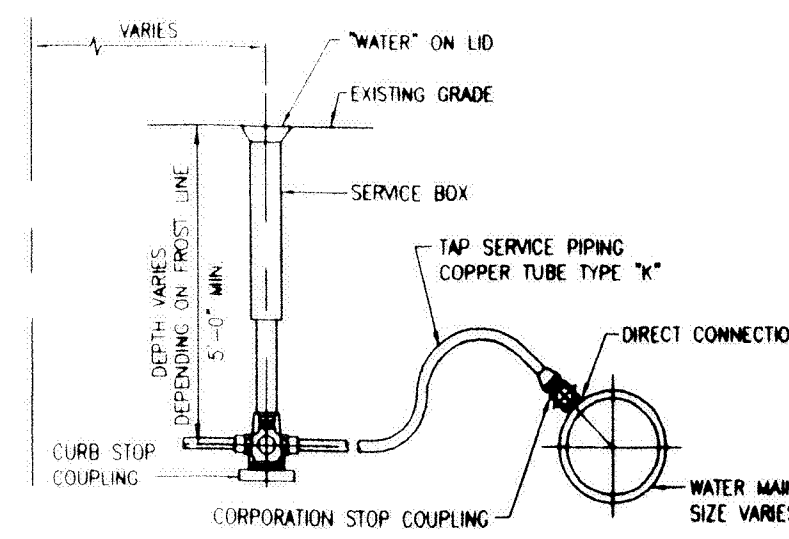
MAIN LINE WATER VALVE, 12" or smaller

NTS



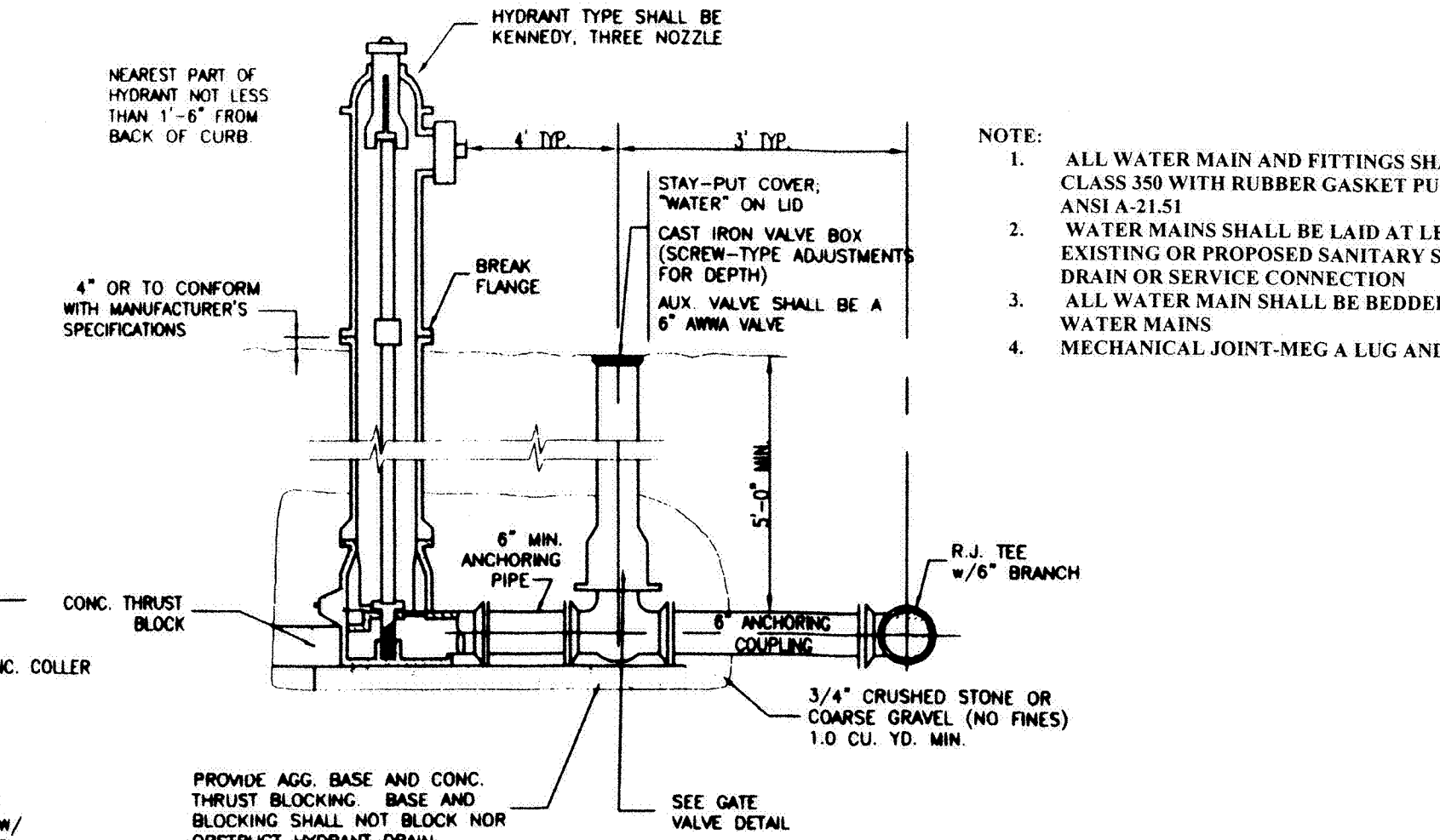
MAIN LINE WATER VALVE, 16" BUTTERFLY

NTS



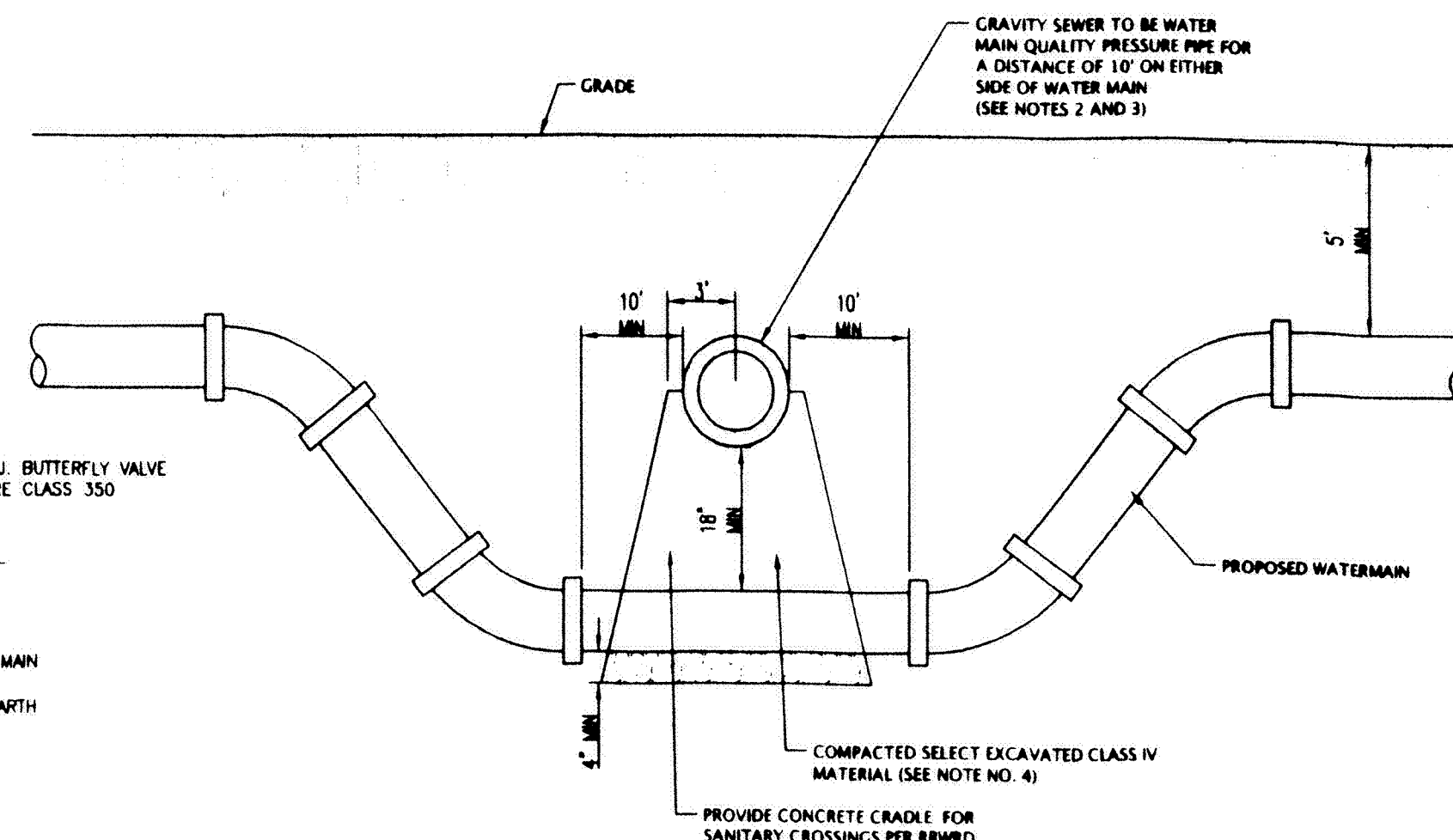
TYPICAL TAP SERVICE PIPING

(COPPER)



FIRE HYDRANT ASSEMBLY (TYPE "A")

NTS

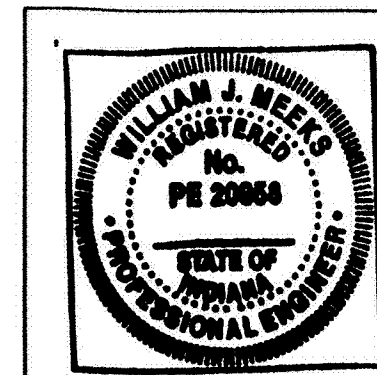


NOTES:

1. CONTRACTOR MAY BEND WATER MAIN PIPE UNIFORMLY UNDER SEWERS WITHOUT USING FITTINGS PROVIDED THAT JOINT DEFLECTION DOES NOT EXCEED 5 DEGREES PER JOINT FOR PIPE UNDER 14" IN SIZE AND 3 DEGREES PER JOINT FOR PIPE 14" AND OVER IN SIZE. IF FITTINGS ARE USED, CONTINUOUS STRAPPING WITH RODS, STRAPS, NUTS AND BOLTS BELOW NORMAL WATER MAIN DEPTH ARE REQUIRED OR RETAINER GLANDS MAY BE USED IN LIEU OF STRAPPING. RETAINER GLANDS TO BE CLOW NO. F-1058 OR APPROVED EQUAL.
2. ALL SANITARY SEWER (INCLUDING SERVICES) CROSSINGS WHERE THE WATER MAINS OR WATER SERVICES ARE LESS THAN 18" ABOVE THE SEWER VERTICALLY SHALL BE POLYVINYL CHLORIDE PRESSURE PIPE AND SHALL CONFORM WITH THE LATEST REVISION OF ASTM SPECIFICATION D 2241 SDR 26 (160 PSI). JOINTS SHALL CONFORM TO ASTM D 3139 AND ELASTOMERIC GASKETS SHALL CONFORM TO ASTM F 477. THE SAME PIPE AND JOINT MATERIAL SHALL BE USED WHENEVER WATER MAIN CROSSES BELOW THE SEWER.
3. ALL STORM SEWER (INCLUDING SERVICES) CROSSINGS WHERE THE WATER MAINS OR WATER SERVICES ARE LESS THAN 18" ABOVE THE SEWER VERTICALLY SHALL BE REINFORCED PRECAST CONCRETE SEWER PIPE ASTM C78 OR C361 PIPE WITH ASTM C443 JOINTS. THE SAME PIPE AND JOINT MATERIAL SHALL BE USED WHENEVER WATER MAIN CROSSES BELOW THE SEWER.
4. COMPACTED MATERIAL BELOW SEWER SHALL CONFORM TO THE I.A.C.
5. HORIZONTAL AND VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWERS SHALL COMPLY WITH THE I.A.C.

WATER MAIN CROSSING

NTS



CITY OF CROWN POINT

ENGINEERING DEPARTMENT
101 N EAST ST
CROWN POINT, IN 46307
(219) 662-3242

DRAWN BY: G. ABRAHAM DATE: 5-1-07
FILED: APPENDIX "A" SHEET 1 OF 2